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Earth Image on front cover:

NASA Goddard Space Flight Center Image by Reto Stöckli (land surface, shallow water, clouds). Enhancements by Robert Simmon (ocean color, compositing, 3D globes, animation). Data and technical support: MODIS Land Group; MODIS Science Data Support Team; MODIS Atmosphere Group; MODIS Ocean Group Additional data: USGS EROS Data Center (topography); USGS Terrestrial Remote Sensing Flagstaff Field Center (Antarctica); Defense Meteorological Satellite Program (city lights).

Girl Drinking Water: www.ecn.purdue.edu

Lake Perry and the Delaware River:

Wesley Ervin May 2005

Rain Garden:

<http://www.raingardennetwork.com/raingardenis.htm>

Failing Septic System:

Atchison County Complaint July 2004

Rain Garden Painting on back cover: Michigan artist Ruth Zachary:

<http://www.raingardens.org/Index.php>

Applied Ecological Services, Inc., includes designs with plant list:

www.appliedeco.com/RainGardens.cfm

EPA Nonpoint Source Pollution Information: <http://epa.gov/owow/nps/>

General information: www.raingardens.org

Home/Farm*A*Syst is a confidential, self-assessment program you can use to evaluate your home and property for pollution and health risks:

<http://www.sbeap.org/homeasyst/>

KS Water Well is a public educational campaign to encourage Kansans with rural water wells to test their water for pollutants:

<http://www.kswaterwell.org/>

Layman's Guide to Kansas' Water Terminology & Acronyms

<http://www.hwqp.org/KELP%2520final.pdf>

Rain garden designs including gardens for sun, shade, butterflies, shrubs, etc.: www.ci.maplewood.mn.us

Rain Gardens – A how-to manual for homeowners:

www.dnr.state.wi.us/org/water/wm/dsfm/shore/documents/rgmanual.pdf

State Conservation Commission: <http://www.accesskansas.org/ksccl/>

For Further Information Contact:

Kansas Department of Health & Environment

Bureau of Water

Watershed Management Section

1000 SW Jackson Street Suite 420

Topeka, KS 66612

(785) 296-4195

<http://www.kdheks.gov/nps/index.html>



Source Water

Protection:

What You Can Do

Residential



Before I flew I was already aware of how small and vulnerable our planet is; but only when I saw it from space, in all its ineffable beauty and fragility, did I realize that human kind's most urgent task is to cherish and preserve it for future generations.

- Sigmund Jähn, German Democratic Republic

Water treatment costs are increased whenever contaminants are introduced into your drinking water supply

Location	Potential Water Quality Impacts	What You Can Do
Apartments/ Condominiums	Improper use, storage, and disposal of household and facility maintenance chemicals including pesticides, fertilizers cleaners, vehicle maintenance products, and pool chemicals may impact the drinking water supply. Stormwater run-off or infiltration may carry contaminants to drinking water supply.	<p>Promptly repair any fluid leaks your vehicle develops. Explore the possibility of installing a rain garden, small vegetated depressions that collect, store, and infiltrate stormwater runoff and snow melt, in a common area. Beyond its use for stormwater control, the rain garden provides aesthetically pleasing landscaping and a natural habitat for birds and butterflies.</p> 
Campgrounds/ RV Parks	 <p>Heavy usage along the edge of a waterbody may contribute to erosion, resulting in excess sediment load to the lake or stream. Leaks or spills of automotive fluids or improperly managed septic systems and wastewater disposal may impact drinking water supply.</p>	Practice good stewardship as you enjoy outdoor activities. Properly maintain your camping equipment and repair any leaks your RV may develop. Insure your septic system is functioning properly and use wastewater disposal stations provided in most campgrounds. When visiting lakes or streams, make sure your activities do not cause lasting damage to the shoreline. Dispose of trash in containers provided and make sure the lids are tightly closed. Use walkways when available.
Housing - High Density > 1 House/0.5 Acres	Improper use, storage, and disposal of household chemicals including: Cleaners, vehicle maintenance products, pool chemicals, pesticides and fertilizers may impact the drinking water supply. Stormwater run-off or infiltration may carry contaminants to drinking water supply. Discharging chlorinated pool/spa water into streams, (or irrigation canals, ponds, etc.) is harmful to fish and other aquatic life.	 <p>Consider using permeable paving materials, landscape with native plants, install a rain garden, and avoid the use the fertilizers and pesticides. Properly store cleaners, vehicle maintenance products, pool chemicals, pesticides, and fertilizers. Hold the water in the pool or hot tub for at least one week to reduce the chlorine level prior to discharge and do not allow the water to flow into any water body. Save unwanted household chemicals for the next household hazardous waste collection day.</p>
Lawn Care - Highly Maintained Areas	Over-application or improper handling of pesticides or fertilizers may impact drinking water. Excessive irrigation may cause transport of contaminants to groundwater or surface water through runoff.	Test your soil before applying fertilizers and pesticides and apply only what your lawn needs, in accordance with directions on label. Use turf grasses, ornamental plants, trees and flowers that tolerate your local conditions. Contact a reputable local garden supplier or your county Research and Extension Office for assistance and further information.
 <p>Schools</p>	Stormwater runoff from parking lots and concrete areas increases flooding and carries motor vehicle fluids and other pollutants into local streams and lakes. Vehicle maintenance wastes, cleaning products, pesticides, and fertilizers may contribute contaminants if proper handling, storage, and disposal practices are not followed.	<p>Contact your school and discuss the possibility of building a rain garden on school grounds. In addition to the benefits discussed above, a rain garden provides an outdoor classroom. Notify the school administrator or maintenance personnel of motor vehicle leaks, spills, and improper storage of cleaning fluids, fertilizers, and pesticides.</p> 
Septic Systems	<p>If not properly sited, designed, installed, and maintained, septic systems can impact drinking water. Domestic wastewater can contain bacteria, viruses, nitrogen, and phosphorus. Use of drain cleaners and dumping household hazardous wastes can result in groundwater contamination.</p> 	Garbage disposals add solids to the system, resulting in the need for more frequent pumping out of the septic tank. Consider composting instead, an excellent way to add nutrients to your garden. Grease and cooking oil congeals and can clog your pipes, tank, and leaching system. Save unwanted household chemicals for the next household hazardous waste collection day in your community. The less put into the system, the longer it will function properly. Pump out your tank every 3-5 years.